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ABSTRACT

The Louis D. Brandeis High School Bilingual Program served 900 New York City Hispanic students with limited proficiency in English. In addition to developing English and Spanish language skills the program provided content area instruction in Spanish in social studies, mathematics, and science. Staff development, mainstreaming, parental involvement activities, and supportive services formed additional program components. Criterion referenced tests were used to evaluate the effects of the program on student performance. Evaluative findings indicated that (1) students mastered a majority of objectives in English as a Second Language instruction, (2) all students made gains in reading Spanish, although only at the ninth grade level were gains significant, (3) only ninth graders in the fall term met the mathematics criterion, (4) almost half the students reached the criterion of achievement in science, (5) all twelfth graders and half of the students in other grades reached the criterion level in social studies, (6) all students exceeded the criterion in Spanish language arts, and (7) most students appeared to be making progress in oral English proficiency. Bilingual program students had average attendance rates of 88-92%. Recommendations for future program implementation are included. (MK)

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FINAL EVALUATION REPORT

LOUIS D. BRANDEIS HIGH SCHOOL
BILINGUAL PROGRAM

1978-1979

PROJECT 5004-97633

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CHAPTER 720



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FINAL EVALUATION REPORT
LOUIS D. BRANDEIS HIGH SCHOOL
BILINGUAL PROGRAM
1978-1979

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LOUIS D. BRANDEIS HIGH SCHOOL

BILINGUAL PROGRAM

SECTION I: PROGRAM DESCRIPTION

A. Introduction: The Milieu in which Brandeis High School Functions

Louis D. Brandeis High School is a centralized high school under the direct supervision of the New York City Board of Education. This high school is located on the mid-west Side of Manhattan. The neighborhood is a potpourri of various ethnic and social-economic groupings, including welfare recipients in single room occupancy (SRO) hotels, low income tenements, public housing projects, Mitchell Lama middle income cooperatives, middle income housing, and brownstones in various degrees of elegance and disrepair. Economically, the area is experiencing a renaissance, as indicated by the large number of flourishing restaurants, boutiques, and fruit and vegetable markets springing up all over the neighborhood.

The zone for admittance to Louis D. Brandeis High School encompasses for the most part low-income Black, Puerto Rican, Dominican and other Hispanic groups, and Haitians. A perusal of the map of Manhattan clearly demonstrates that the majority of the feeder schools are located in West Harlem, El Barrio and the upper East Side, Manhattan Valley, and the lower West Side of Manhattan-- areas that house large Hispanic and Black low-income populations. This is illustrated by the fact that out of a school population of 3,968 pupils, 1,884 or 47.47% are Hispanic. In addition, 24.9% of the total school population is of Limited English Proficiency, and 52.4% of the total Hispanic population is of Limited English Proficiency. Moreover, students from various ethnic groups, such as Haitians, Chinese, Koreans and Russians, also attend Brandeis High School.

Free lunch is one of the criteria for low income categorization. According to official statistics, 2,300 or 57.9% of the students are currently receiving free lunch. Brandeis is also officially categorized as a Title 1 school because 90% of the Limited English Proficiency students fall within the low income specifications. Several factors contribute to the large number of students of Limited English Proficiency at Brandeis. As was mentioned previously, the high school serves a geographic area which is a mecca for newcomers to the United States. And these newcomers represent diverse languages and cultures, as can be seen in the following table.

TABLE I

Admissions Data- 1976-1978 Brandeis High School*
 Number- Limited English Proficiency Students
 Port of Entry- New Arrivals in U.S.A.

<u>Language Group</u>	Fall, 1977	Spring, 1978	Fall, 1978	Sp.'79
Spanish	118	58	193	62
French/Haitian/Creole	13	6	6	8
Chinese	7	3	8	0
Miscellaneous (eg. Russian, Thai, Hungarian, Arabic, Vietnamese, Urdu)	8	1	7	4
Total	159	68	214	74

* Source: Louis D. Brandeis High School

The demographic patterns in the feeder junior high schools account for the large number of students of Limited English Proficiency who attend Brandeis High School. Note the following table:

TABLE II
Limited English Proficiency Pupils
from Brandeis feeder Junior High/
Intermediate Schools December, 1978*

<u>School</u>	<u># Hispanic Pupils Admitted</u>	<u>Limited English Proficiency</u>	
		<u>#</u>	<u>%</u>
J.H.S. 54	514	200	38%
J.H.S. 118	555	175	32%
J.H.S. 52	1294	538	41.5%
J.H.S. 143	1424	413	29%
J.H.S. 164	216	129	59.7%
J.H.S. 44	384	135	35%
Total	4387	1590	36.2%

*Source: District Consent Decree
Reports- December, 1978

Thus it can be projected that in the coming school year Brandeis High School will continue to receive at least 400 9th and 10th grade students who are of limited English Proficiency.

B. Summary of Program Data

Number of Sites: 1-Louis D. Brandeis High School

Target Population: Hispanic Pupils of Limited English Proficiency

Serviced from 9th through 12th Grades

Number of Pupils Served: 900-(Documented). This is 500 pupils
over what was projected in the Proposal.

Dates of Operation: September, 1978, through June, 1979

Project Director: Emilia G. Cardona

Language: Spanish

This program was originally funded to serve 400-450 Hispanic pupils of Limited English Proficiency. Documentary support has been officially submitted to the effect that this program has served 900 Hispanic pupils, who are of Limited English Proficiency. In addition to developing English language skills for non-English speaking students, and Spanish language skills for Hispanic students, the program also provides content area instruction in Spanish in Social Studies, Mathematics, and Science.

Student programs are prepared by grade advisors, and are based on the particular linguistic and academic requirements of the individual student. Programs are consistent with the requirements for high school graduation. Students are programmed for six classes per day, with a minimum of two in English as A Second Language. Seniors in the program receive counseling concerning college/vocational and career choices from the College and Vocational Advisor. The staff development component is based on university courses, which are chosen toward improving teachers' competency and expertise in their respective subject areas, as well as in the theory and practices of bilingual/bicultural education.

Parents participate in this program by means of an Advisory Council which was established to keep parents informed. In addition, this Council is asked for recommendations, assists in disseminating information about the program, and assists in planning special activities for parents and students.

C. The Instructional Component

English as a Second Language:

With the goal of developing English language skills in the students participating in the program, instruction in English as a Second Language is offered on seven different levels. The first level is designed for those students with absolutely minimal knowledge of spoken English. These students are new arrivals in the United States. The other six levels represent a continuum of competencies in English language skills-- from learning to express oneself orally in the present tense, to writing in complex sentences using adverbial and adjective phrases.

Groupings for instruction in English as a Second Language consist of a minimum of 74 minutes daily for those in ESL 1, to 111 minutes daily for all other students of Limited English Proficiency. The average number of students in each class does not exceed 25 students. In addition to the trained ESL specialist, each group receives the services of a trained paraprofessional to insure individualized instruction for each student. Moreover, the teacher and the paraprofessional jointly prepare the material to be presented in the classes.

TABLE III

Louis D. Brandeis High School

English as a Second Language

Classes- 1978-1979*

Subject	Total Class Register	Language of Instruction	% Class Time	-Periods per week
ESL 1,2,3,	534	English	100%	10
ESL Transition 5	188	English	100%	10
ESL Transition 6	51	English	100%	5
ESL 4	26	English	100%	10
ESL Reading 1,2,3	333	English	100%	5
Total 1232				

Note: English as a Second Language Pre-Transition was not given in the Spring, 1979 semester.

Source: Louis D. Brandeis
High School Records

Spanish Language Arts:

All the students with Limited English Proficiency who participate in the program are completely fluent in oral Spanish. However, they exhibit different levels of competency in the reading and the writing of their native language, Spanish.

In order to meet their individual needs, the program offers ten different courses. These run the gamut from a review of basic grammar and composition to a thorough study of the rich and varied Hispanic literature.

Each participating student studies Spanish for 37 minutes a day, at one of the 10 levels of instruction. As in English as a Second Language, the language teacher and the paraprofessional work together. Materials are used to encourage the students to form a greater awareness of their bilingualism as a positive academic and career asset.

D. Staffing and Staff Development

This program is staffed by 7 professionals who are paid out of Title VII funds. These are supplemented by 8 teachers and 8 paraprofessionals paid out of Title I funds, and 2 teachers and 1 Paraprofessional paid out of Chapter 720 funds. These in turn are supplemented by Tax Levy funds, which are used to pay the salaries of teachers in the areas of English as a Second Language, Reading in English, Spanish, Mathematics, Social Studies, and Science.

TABLE IV
Instructional Components &
Funding Sources

Instructional Component	Funding Source(s)	Number of Personnel	
		Teachers	Paraprofessionals
ESL	Title I, PSEN, Tax Levy	Tax Levy 4.8	Title I 8
		Title I 7.8	
		PSEN. 6.4	
Mathematics	Tax Levy, PSEN, Title VII	Tax Levy 3.2	Title VII 3
		PSEN. 2.2	
Spanish	Tax Levy, 720	Tax Levy 7.0	Chapter 720
Reading (Mainstream)	Tax Levy,	Tax Levy 3.0	
Social Studies	Tax Levy, 720	Tax Levy 2.6	
		Chapt. 720 1.0	
Science	Tax Levy,	Tax Levy 3.2	

-8-

Source: Louis D. Brandeis
High School

Staff Development:

The staff development component of the Bilingual Program consists of In-Service Training and University Training. The In-Service Training consisted of the following. An In-Service Workshop was conducted in September to strengthen the staff's comprehension of the general theories and philosophy of Bilingual Education, to make them aware of the specific objectives of the Brandeis High School Bilingual Program, and to brief them on the career education and individualization objectives of the program.

During the past year-- 1978-1979-- Workshops were conducted by consultants in the following areas: individualized instruction, utilization of community resources in instruction, instructional implementation of career education objectives, and parental involvement in bilingual education. Staff Conferences were held once a month for the purpose of discussing and evaluating the progress of the program. In addition, pre-and post-observation conferences were frequently held to evaluate and assess both the strengths of the teacher and areas in which there might be improvement.

During the academic year the Project Director and staff members attended the New York State SABE Conference, the TESOL Conference held in Boston, Massachusetts, the NABE Conference in Seattle, as well as various conferences sponsored by the New York City Board of Education. In addition, various members of the staff visited other bilingual high school programs functioning in New York City for the purpose of exchanging information and observing how others conduct their programs.

University Training

During the course of the academic year the program staff, in consultation with the Project Director, were permitted to choose selected courses at New York University in its Division of Foreign Languages and International Education, and at the City University of New York. Both of these institutions

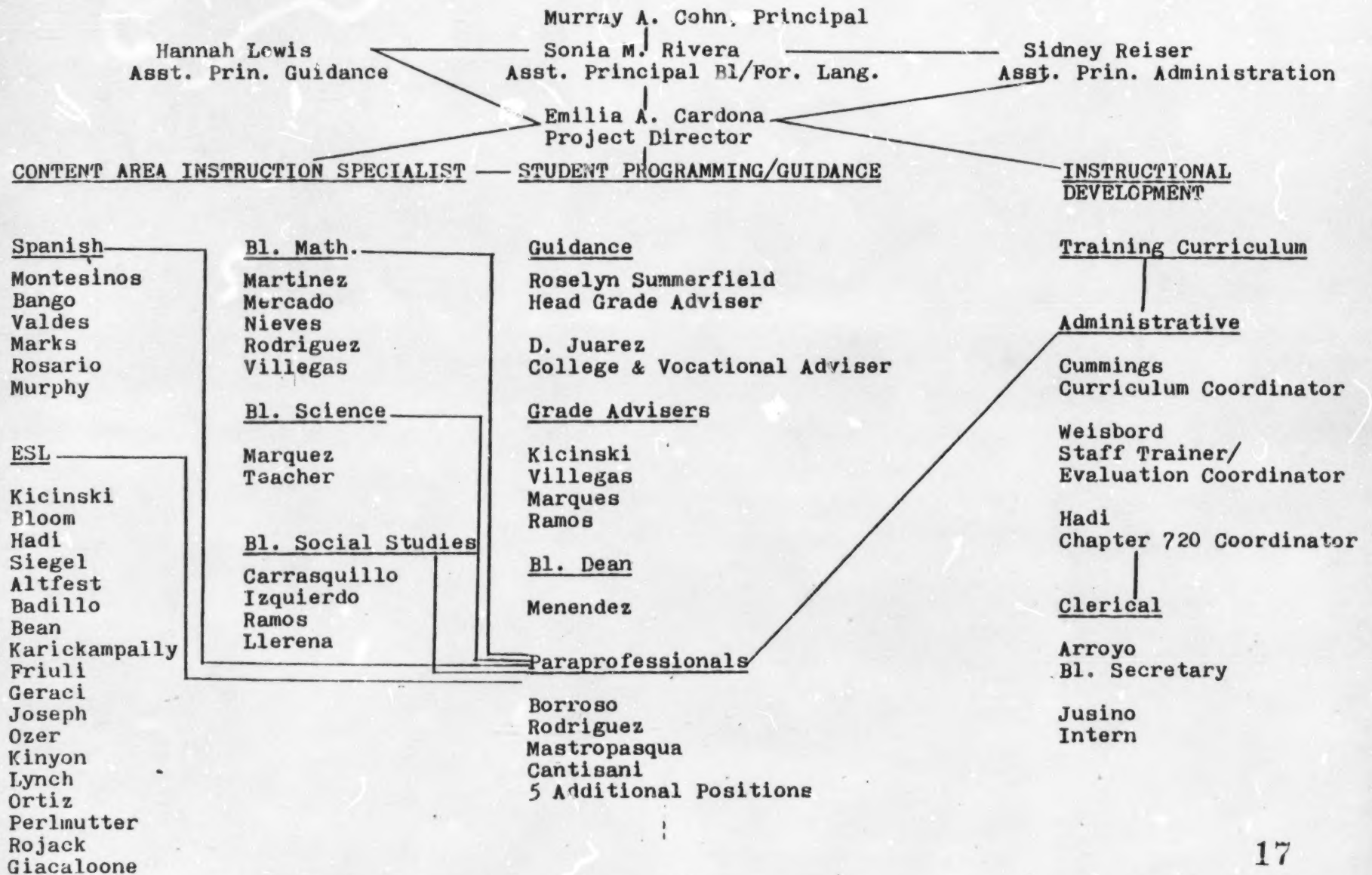
offer programs leading to a Master's Degree in Bilingual Education. Among the courses selected were those in Advanced Spanish Syntax, Spanish Literature, English as a Second Language, Psychology, and courses in content areas, such as Science, Social Studies, and Mathematics.

E. Management of Program:

The Title VII Project Director at Brandeis High School, Mrs. Emilia Cardona, works under the supervision of Ms. Sonia Rivers, the Assistant Principal for Bilingual Education and Foreign Languages. Mrs. Cardona is responsible for the smooth functioning of the teachers instructing in Spanish, ESL, Bilingual Mathematics, Bilingual Science and Bilingual Social Studies. In addition, she coordinates and cooperates with those responsible for student guidance services, paraprofessional services, curriculum development, and evaluation of services.

The following is the Management Plan for the Bilingual Program at Louis D. Brandeis High School.

CHART I
MANAGEMENT PLAN, LOUIS D. BRANDEIS HIGH SCHOOL BILINGUAL PROGRAM



Subject	Total Class Register	Language of Instruction	% Class Time	Periods Per/wk
Academic Social Studies	147	Spanish	95%	5
Non-Academic Social Studies	250	Spanish	100%	5
Spanish	210	Spanish	100%	5
Spanish (Intermediate-Advanced)	596	Spanish	100%	5

Source: Louis D. Brandeis High School

Mainstream Classes:

Depending upon their level of competency in English, program students may participate in mainstream classes. These include academic and non-academic American History, General Science, Biology, Chemistry, any academic mathematics beyond Geometry, Reading in English, Typing and Secretarial Studies, Health Education and English. Placement in these classes is made on the basis of the student's competency in English, and teacher/counselor judgment.

Curriculum:

The Curriculum, which includes English as a Second Language, various areas in high school Social Studies, Mathematics, Science, English, Spanish, and Language Arts, follows the requirements of the New York City Board of Education. In our judgement, the quality and availability of materials is not only appropriate to the student's native language, but is specifically designed to meet fully the academic requirements of the students participating in this Bilingual Program.

Hispanic History and Culture:

Knowledge and comprehension of Hispanic/Latin American culture, both as it exists in this country and in the country of origin of the student participant, is provided in the following manner. A special course in Latin American History is offered to all student participants, as well as to other students. Within the framework of this course, the similarities as well as the differences among Hispanics are carefully studied, and their role in the United States is highlighted. Also, Spanish language arts classes are structured so as to maximize knowledge about the cultural and linguistic heritage of Hispanic Americans. In addition, the textbooks and materials utilized in the course are scrutinized to assure that cultural biases are not present.

To complement the above, extracurricular activities are planned, which include field trips within Latino communities, as well as assembly programs stressing Hispanic culture, such as Puerto Rican Discovery Day, Dominican Independence Day and Pan American Day.

The following is a breakdown of the Bilingual classes which are part of the Bilingual Program at Brandeis High School (excluding the ESL component):

TABLE V

Louis D. Brandeis High School
Bilingual Classes-1978-1979

Subject	Total Class Register	Language of Instruction	% Class Time	Periods Per/wk
Academic Math.	292	Spanish	90%	5
Non-Academic Math.	311	Spanish	100%	5
Transitional Academic Math.	37	Spanish	100%	5
9th Year General Science	173	Spanish	100%	5
Academic Biology	173	Spanish	90%	5

History and Culture:

A major goal of this program is to insure that all who participate -- students, staff and parents -- understand the positive aspects of the culturally pluralistic nature of American society. To this end all the activities are designed to promote cultural pluralism. It is within this framework that United States History and culture are taught.

United States History and Culture:

On the formal instructional level, knowledge about the history and culture of the United States is provided in the following ways. Within the ESL curriculum, the culture of the United States is explained, and national holidays become the focus of several lessons during the year. Students are also introduced to the different customs which are accepted in the United States, but are not practices in Hispanic America. For example, a class may discuss how dating customs differ between the Hispanic and American cultural milieus. Another example is the celebration of Thanksgiving, which is not celebrated in nations of Latin American heritage. These cultural differences are been explored with understanding and sensitivity, to reduce student anxieties and to create in the student participants an awareness and comprehension of mainstream American culture.

In reading, the third level of instruction in English as a Second Language, the selections studied focus on American History and culture. In this manner, as the students are improving their skills in English, they are also acquiring basic knowledge of American History.

For juniors and seniors, the specific course requirements for graduation include two semesters of American History, and Economics. In the latter course offering, a thorough knowledge of the American economic system is required for the successful completion of the course of study.

Subject Area Instruction in Spanish:

For the purpose of meeting the academic requirements of the students participating in the Program, the following are the 21 course offerings taught in Spanish

TABLE VI
Louis D. Brandeis High School
Academic Course Offerings Taught
in Spanish-1978-1979*

Social Studies	Mathematics	Science
Latin American History	Remedial Math. 1&2	General Science 1&2
World History 1&2	General Math. 1&2	Biology 1&2
Economics (Consumer Education)	Algebra 1,2,3,	
American History 1	Record Keeping 1&2	
	Geometry 1,2,3	

* Source: Louis D. Brandeis
High School

Under the guidance of his/her grade advisor and consistent with the requirements for high school graduation, the individual student selects two or three of the aforementioned course offerings, depending on the number of English as a Second Language classes carried. These constitute from 74 to 111 minutes of his/her daily program.

In addition, in keeping with the objectives defined in the Application for Funding, aspects of career education which are compatible with the content of each subject area-- for example, the examination of opportunities available in the health care area-- are integrated in the instructional program.

F. Parental Involvement

Parental participation in the planning and operational aspects of the Bilingual Program is achieved in two ways. Parents are selected by themselves for membership in the Brandeis Bilingual Program Advisory Board. The Parent Advisory Board participates with the Project staff in the formulation and implementation of policies, plans, and evaluation of program. They serve as liaison with parents of students participating in the program, in order to encourage greater parental participation. Six parents and 3 students participate on the Advisory Board.

At the monthly meetings, the parents are given the opportunities to question, to give recommendations, and find out how the program operates. In addition, they are given the opportunity to get to know the teachers who are instructing their children.

The Advisory Board also meets monthly, and has carried out the following plan of action.

1. General bilingual parent meetings are held on a quarterly basis throughout the academic year.
2. Parent-teacher nights are held once each semester to provide parents with personal assessment of their children's progress.
3. Intercultural events are scheduled during the year, so that parents can participate.
4. Newsletters written in Spanish are sent out periodically, informing parents of program activities.
5. Information is disseminated to parents on the availability of classes for High School Equivalency Diplomas in the Brandeis Evening Program, as well as other programs and courses available to them.

Parents are encouraged to call the Project Director and the staff to discuss the program, and to resolve any problems that might occur. In general the degree of parental participation at Louis D. Brandeis High School is extraordinarily high.

G. Supportive Services

The school's closest cultural resource, the American Museum of Natural History, has proved to be a fountain of information for field trips, class papers, instructional information, special projects, and special assembly programs held on Puerto Rican Discovery Day, Dominican Independence Day, and Pan American Day.

The Museo del Barrio has served during this academic year as a focus of field trips, as well as enrichment activities designed to develop and maintain positive cultural and self-image. These activities include lectures, workshops, dance and musical presentations, art workshops and exhibits, and multi-media activities.

SECTION II: PROGRAM GOALS

Program Goals:

1. While students of Limited English Proficiency are developing English language skills, they will continue to develop conceptual skills in content areas. Since the content area subjects taught in Spanish follows the curriculum that is used to teach non-LEP students, the student of Limited English Proficiency will develop the same conceptual skills. At the Same time he/she will be fulfilling course requirements for graduation.
2. A significant number of student participants will complete a high school education.
3. Limited English speaking students will develop and maintain reading, speaking, writing and listening skills in English.
4. Through the study of and in their native language, limited English speaking students will develop and/or have an enhanced positive self-image.
5. Through the study of American culture, students will understand and value a culturally pluralistic society.
6. Students will develop comprehension and appreciation of the relationship between education and the world of work (eg. study habits as related to self-disciplining required for employment).
7. Students will develop the skills and attitudes common to a variety of careers.
8. Students will become aware of a variety of options presented by the occupational world, as well as becoming familiar with further education and training which each one requires.

9. Program staff will develop or maintain knowledge and competency in the philosophy, principles and practices of Bilingual/Bicultural Education.
10. A significant number of parents will be recruited for participation in the Bilingual Education Program housed at Brandeis.

SECTION III: ASSESSMENT PROCEDURES AND FINDINGS

A. Screening Criteria for Program Placement

This Bilingual Program serves only students of Limited English Proficiency. They are identified by the following criteria.

Criterion # 1. Those students who are new arrivals in the United States and demonstrate little or no knowledge of English.

- a) They are interviewed personally with the head Grade Adviser.
- b) School records or report cards from the student's country of origin are reviewed.
- c) The Language Assessment Battery is administered.

Criterion # 2. Those students who score below the 21% percentile on the English part of the Language Assessment Battery, and score higher on the Spanish part of the test.

Criterion # 3. Students who score below the 21% percentile on the Language Assessment Battery, and have a reading grade in English of less than 6.5.

Criterion # 4. Those students coming from feeder junior/intermediate schools who have been recommended for the Program, and who fulfill criteria 2 and 3.

B. Identification of students who have achieved proficiency in English: Exiting Criteria

Students who have achieved proficiency in English are identified by the following criteria.

- 1. Those students who score on or above the 21% percentile on the English Section of the Language Assessment Battery.

2. Teacher/Grade Adviser recommendation that the student is ready for content area instruction in English.
3. Student's self-evaluation as to his/her growth in English Language skills. This option is allowed because the program deals with high school students.
4. The exact time for placement in content area instruction in English will vary according to subject matter. It is possible for a student to score 21% on the English LAB and yet have a low reading that would retard his progress in Biology or World History, if he/she studied them in English.

C. Evaluation Instrument and Procedures

The following section refronts the results of the testing administered to establish the effect of the program on student performance. Students were tested in the following areas.

Reading in English -- Criterion Referenced English Syntax Tests (CREST)

Reading in Spanish -- Inter American Series, Prueba de Lectura

Mathematics Teacher-made Criterion Referenced Tests

Science Teacher-made Criterion Referenced Tests

Social Studies Teacher-made Criterion Referenced Tests

Native Language Arts (Spanish) Teacher-made Criterion Referenced Tests

English Language Arts N.Y.C. Language Fluency Scale

In addition, information is provided on the attendance rate of students participating in the bilingual program compared with that of the mainstream school population.

The following analyses were performed:

- 1) On standardized tests in reading in English and Spanish and mathematics correlated tests were performed. This analysis demonstrates whether there is a significant difference between testing conducted at two points in time for students with matched pre/post-test scores. It does not represent an estimate of how students would have done in the absence of the program. No such estimate could be made because of the inapplicability of the norms for this population and the unavailability of an appropriate comparison group.
- 2) On the Criterion Referenced English Syntax Test (CREST), information is provided on the number of objective attempted and mastered, the percentage of objectives mastered versus those attempted, and the number of objectives mastered per month of treatment. Information is also provided on student performance on the various test levels.

During the 1978-1979 academic year, 165 students took the Beginning Level in October, 1978, 229 took the Intermediate Level, and 84 took the advanced Level that same month. All students were post-tested in January, 1979-- those who changed levels were pre-tested in February. All students were post-tested in their present level in May, 1979.

- 3) The results of the criterion referenced tests are reported in terms of the number and percent of students achieving the criterion levels set for the participants.
- 4) The attendance rate for program students, by grade, will be compared to that for the total school population.

TABLE VII

English as a Second Language
for Spanish Language Students

Results of the Criterion, Referenced, English, Syntax, Test (CREST)
Reporting the Number of Objectives Mastered, Percent Mastered,
and Objectives Mastered Per Month.

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Months of Treatment	Objectives Mastered Per Month
9	235	13.5	7.3	54%	9.1	.8
10	244	12.4	7.5	60%	9.5	.8
11	159	9.2	6.2	67%	9.4	.7
12	13	7.5	4.7	62%	6.5	.7
Totals	651	11.9	7	59%	9.3	.8

Table VII gives the results of the Criterion, Referenced, English, Syntax, Test (CREST). It shows that the students did almost equally well across grades as far as Objectives Mastered per Month although they did slightly better (.8 per month) in the lower grades than (.7 per month) in the upper grades. There is, however a decrease in the Average # of Objectives Mastered in the 11th and, more noticeably, the 12th grade. This is related to a similar decrease in the Average # of Objectives Attempted (i.e. they are mastering less because they are attempting fewer objectives) and, in the case of the 12th grade, is connected to the markedly low figure in the Average Months of Treatment category (they averaged only 6.5 months of treatment compared to over 9.1 in all other grades).

TABLE VIII
English as a Second Language
for Spanish Language Students

Student Performance on the
Criterion-Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

Grade	# of Students	LEVEL I			LEVEL II			LEVEL III		
		Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	235	2313	1215	53%	710	407	57%	155	85	55%
10	244	1160	650	56%	1575	1003	64%	291	170	58%
11	159	309	187	61%	791	535	68%	369	261	71%
12	13		-	-	73	47	64%	25	14	56%
Total	651	3782	2052	54%	3149	1992	63	840	530	63%

Table VIII gives a breakdown, by test level, of the CREST results for the ESL students. This breakdown indicates that as the grade increases there is a fairly consistent proportionate growth in the number of students working on the higher level (Level II and III) reading skills. It is apparent from the Percent Mastered category that students, regardless of grade level, are having more successes in mastering Level II and III skills than those working on Level I skills.

TABLE IX

Spanish Language Performance

Spanish Reading Performance on the Inter American Series, Prueba de Lectura, Form L3CES, Reported by Grade and Including Pre/Post-Test Raw Score Means, Standard Deviation and Tests of Significance

GRADE	N	PRE TEST		POST TEST		MEAN DIFF.	t TEST	df	LEVEL OF SIGNIFICANCE
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION				
9	198	57.7	23.6	64.5	22.6	6.8	4.34	197	.01
10	243	66.0	23.8	68.4	23.0	2.4	1.62	242	n.s
11	174	74.9	21.8	78.1	20.1	3.2	1.92	173	n.s
12	66	91.0	20.7	93.8	17.0	2.8	1.39	65	n.s

All grade levels demonstrated a positive gain in reading in Spanish, ranging from 2.4 raw score points difference between pre-and post-testing administrations at the tenth grade to 6.8 at the ninth grade. Ninth grade students demonstrated gains which were statistically significant beyond the .05 level of probability. All other gains were not statistically significant.

TABLE X

Achievement in Mathematics

Comparison of Mathematics Examinations Passed Fall 1978 and Spring 1979 by
students Regardless of Year of Entry and Full or Partial Instructional
Treatment

Grade	Fall 1978			Spring 1979		
	No. taking subject	No. passing	%	No. taking subject	No. passing	%
9	209	140	67%	241	149	62%
10	215	126	59%	230	143	62%
11	148	82	55%	145	81	56%
12	36	21	58%	3	1	33%

The number of students passing Mathematics examination in the Fall ranged from a low of 55% in the 11th grade to a high of 67% in the 9th grade. The number of students passing Mathematics examinations in the Spring ranged from a low of 33% in the 12th grade to a high of 62% for the 9th and 10th grade. One class met the program criterion level (65% passing): 9th grade Fall (67%). Four other classes were very close to reaching the set criterion: 9th grade Spring (62%), Fall (59%) and Spring (62%), and 12th grade Fall (58%).

TABLE XI

Achievement in Science

Comparison of Science Examinations Passed Fall 1978 and Spring 1979 by Students Regardless of Year of Entry and Full or Partial Instructional Treatment

Grade	FALL 1978			SPRING 1979		
	No. taking Subject	No. passing	%	No. taking Subject	No. passing	%
9	86	53	62%	118	75	64%
10	163	117	72%	203	123	61%
11	142	101	71%	107	47	44%
12	51	43	84%	15	5	33%

The number of students passing Science examinations in the fall ranged from a low of 33% in the 12th grade to a high of 64% in the 9th grade. Three Science Classes met the program's criterion (65% passing). These were the 10th, 11th, and 12th grade classes in the Fall term. Three other classes were close to reaching the criterion level: 9th grade Fall (62%) and Spring (64%), and 11th grade Spring students (61%).

TABLE XII

Achievement in Social Studies

Comparison of Social Studies Examinations Passed Fall 1978 and Spring 1979 by Students Regardless of Year of Entry and Full or Partial Instructional Treatment

Grade	FALL 1978			SPRING 1979		
	No. taking Subject	No. passing	%	No. taking Subject	No. passing	
9	96	58	60%	152	77	51
10	62	35	56%	77	38	49
11	164	104	63%	152	91	60
12	30	25	83%	6	5	83

The number of students passing Social Studies (Spanish) examinations in the Fall ranged from a low of 56% in the 10th grade to a high of 83% in the 12th grade. In the Spring these numbers ranged from a low of 51% in the 9th grade to a high of 83% in the 12th grade. All but two Social Studies classes met the program criterion.

TABLE XIII

Achievement in Native Language Arts

Comparison of Native Language Arts (Spanish) Examination Passed
Fall 1978 and Spring 1979 by Students Regardless of Year of Entry
and Full or Partial Instructional Treatment

Grade	FALL	1978		SPRING	1979	
	No. taking Subject	No. passing	%	No. taking Subject	No. Passing	%
9	190	150	79%	157	121	77%
10	195	164	84%	206	157	76%
11	95	74	78%	17	12	71%
12	2	2	100%			

The number of students passing Native Language Arts (Spanish) examinations in the Fall ranged from a low of 78% in the 11th grade to a high of 100% in the 12th grade. In the Spring these numbers ranged from a low of 71% in the 11th grade to a high of 77% in the 9th grades. All Native Language Arts classes met the program criterion.

TABLE XIV

Oral Language Ability

Number and percentages of Students Advancing One Level or More in the Expressive and Receptive Modes on the Oral Language Ability Rating Scale by Grade Level

Grade	N	<u>Expressive Domain</u> Students Advan- cing 1 Level	%	N	<u>Receptive Domain</u> Students Advan- cing 1 Level	%
9	268	126	47	268	119	44
10	277	108	39	273	98	36
11	176	58	33	176	75	43
12	25	1	4	25	2	8

The percentages of students advancing one level or more in the Expressive Mode of the Oral Language Ability Rating Scale (New York City Fluency Scale) ranged from 47% in the 9th grade to 4% for the 12th grade. In the Receptive Mode, the percentage of students advancing one level or more ranged from 44% for the 9th grade students to 8% for the 12th graders.

One interpretation of these data is that students who entered the program with little proficiency in English made rapid progress on the lower levels of the Fluency Scale (see Appendix A). This would seem to account for the large percentage of 9th graders who advanced one level or more on the Scale during the school year. This progress is to be expected in cases where students are moving from level F (non-speaking) to level E ("speaks English only in stereotyped situations...").

Students in the upper grades and those with greater proficiency in English may have been functioning on the higher levels of the Fluency Scales. These levels represent degrees of fluency approaching or equalling that of a native speaker of English. It is unreasonable and unrealistic to expect rates of student progress at these levels similar to those of beginning students of E.S.L. Level A, for example, is unlikely to be achieved by students who have not had extensive exposure to oral and written English. Those who learn English as adults may never achieve it. Level B is also likely to require years of exposure to English.

As this objective was originally written, expectations for growth centered on those students who were functioning on Levels F, E, and D of the Scale. It was expected that 60% of the E- or F- rated treatment group, and 40% of the D-rated group, would improve one rank in both modes of the Scale. The method of data collection, however, did not report the original rating of the students, while noting growth. The table of student data, nonetheless indicates

• that over 44% of the students in the 9th grade improved one scale level or more.
• In all grades except the 12th, 33% or more of the students improved in their
• ability to understand and speak English.

The data would appear to indicate that Brandeis Bilingual Program students met the criterion level for mastery in this area.

TABLE XV

Attendance

Attendance per Grade with number and Percentage of Students in Bilingual Program with Average Attendance Greater than the Average School Attendance

Grade	No.	Mean Attendance	Standard Deviation	Students Exceeding the school	
				<u>Attendance</u> Number	<u>Rate</u> Percent
9	272	92.0	9.5	249	92%
10	285	90.5	11.2	256	90%
11	216	90.1	12.3	189	88%
12	80	92.0	8.1	72	90%

The average attendance rate per grade ranged from a low of 90.1 in the 11th grade to a high of 92.0 for both 9th and 12th grades. The percentage of students in the bilingual program having attendance rates greater than that for their grade in the total school ranged from a low of 88% in the 11th grade to a high of 92% in the 9th grade. On the whole it appears that students were highly motivated to participate in the programmatic instructional activities.

D. Summary of Findings

1. As Table VII indicates, Brandeis students are progressing in ESL, with students attempting increasingly difficult curricular objectives by grade, and mastering the majority of the objectives attempted in all cases.
2. While students in all grades made gains in reading in Spanish, only at the 9th grade were these gains significant.
3. It was expected that 65% of the students enrolled in content area classes would achieve a grade of 65 or more on teacher-made criterion -referenced examinations in those classes.
 - a. In Mathematics, only one group of students (ninth graders, Fall term) met the criterion, although two other groups came close to achieving it.
 - b. In Science, 3 out of the 8 groups (grades 9 to 12, Fall and Spring terms) met the criterion level, and 3 others came close to attaining it.
 - c. In Social Studies, the 12th graders achieved the criterion level, while 3 other groups nearly achieved it.
 - d. In Native Language Arts, all the groups of students exceeded the criterion level.
4. In tests of oral language ability, most of the students appeared to be making the expected progress in developing proficiency in understanding and speaking English.

5. Bilingual Program students demonstrated rates of attendance which ranged from 88 to 92%, all of which were well above the level for the total school attendance.

CONCLUSIONS AND RECOMMENDATIONS

1. The Brandeis Bilingual Program is one of the largest, best-known and better-established programs in New York City. Many of the coordinators now heading bilingual programs in other New York City high schools taught and were trained at Louis D. Brandeis. Because of the Brandeis programs long role in teacher training, it is recommended that this aspect of the program be strengthened, towards playing a role in developing a training program for high school bilingual teachers, in collaboration with a local University.
2. As was documented in the program description, the Brandeis Bilingual program has been serving a much larger student population than was anticipated, and consequently suffers from staffing limitations. It is recommended that future proposals for funding include provisions for adequate staffing to serve the increased number of students.
3. It is recommended that the career awareness aspect of the program be expanded and developed, since many Brandeis students anticipate working after high school. It is suggested that career orientation be practical and job-oriented, and that it encourage students to examine future trends in the job market.
4. It is recommended that the program be funded for more cultural activities and trips, to take advantage of New Yorks' cultural resources (such as the Ballet Folklórico, the Museo del Barrio and el Teatro Boricua).